Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently Amended) An apparatus, said apparatus being a member of a cluster,
- 2 said apparatus comprising:
- at least one processor;
- a memory coupled to at least one processor;
- a cluster servicer residing in said memory, said cluster servicer facilitating cluster
 messaging, with at least one other apparatus within said cluster, without requiring
 an intervening dedicated local area network to said at least one other computer
- 8 <u>apparatus</u>.
- 1 2. (Currently Amended) The apparatus of claim 1 further comprising a network
- 2 message servicer residing in said memory, said network message servicer routing at least
- 3 one cluster message from said cluster servicer to said at least one other computer
- 4 apparatus.
- 1 3. (Currently Amended) The apparatus of claim 2 wherein said network message
- 2 servicer comprises:
- a User Datagram Protocol, said User Datagram Protocol formatting said at least
- one cluster message to be sent to said at least one other computer apparatus;



- an Internet Protocol, said Internet Protocol routing said at least one formatted
 cluster message to said at least one other computer apparatus without requiring an
 intervening dedicated local area network to said at least one other computer
 apparatus.
- 1 4. (Currently Amended) The apparatus of claim 2 wherein said cluster servicer
- 2 includes a cluster destination address table, said cluster destination address table
- 3 comprising at least one network address for said at least one other computer apparatus,
- 4 and wherein said cluster servicer retrieves said at least one network address for said at
- 5 least one other emputer apparatus from said cluster destination address table to facilitate
- 6 cluster messaging with said at least one other computer apparatus without requiring an
- 7 intervening dedicated local area network to said at least one other emputer apparatus.
- 5. (Currently Amended) The apparatus of claim 4 wherein said cluster destination
- 2 address table further comprises cluster status information for said at least one other
- 3 computer apparatus.
- 1 6. (Currently Amended) The apparatus of claim 4 wherein said cluster destination
- 2 address table further comprises adapter information for said at least one other computer
- 3 apparatus.

lm(

CONT

11

- 7. 1 (Previously Amended) An apparatus comprising:
- 2 at least one processor;
- a memory coupled to at least one processor; 3
- a network message servicer residing in said memory; and 4
- a cluster servicer residing in said memory, said cluster servicer including a cluster 5 destination address table, said cluster destination address table including at least 6 7 one address for at least one other apparatus within said cluster, wherein a message 8 to one of said at least one other apparatus can be sent by said cluster servicer 9 retrieving said at least one address for said at least one other apparatus from said 10 cluster destination address table and passing said retrieved address and said message to said network servicer, wherein said network servicer routes said 12 message to said at least one other apparatus without requiring an intervening 13 dedicated local area network to said at least one other apparatus.
- 1 8. (Original) The apparatus of claim 7 wherein said cluster destination address table
- 2 further comprises adapter information for each of said at least one address for at least one
- 3 other apparatus networked to said apparatus.
- 9. (Original) The apparatus of claim 7 wherein said cluster destination address table 1
- 2 further comprises status information for each of said at least one address for at least one
- 3 other apparatus networked to said apparatus.

- Ap An
 - 1 10. (Original) The apparatus of claim 7 operating as a computer cluster, said
 - 2 computer cluster comprising at least one other apparatus networked to said apparatus,
 - 3 wherein each apparatus in said computer cluster comprises:
 - 4 at least one processor;
 - 5 a memory coupled to at least one processor;
 - a User Datagram Protocol residing in said memory, said User Datagram Protocol
 - 7 formatting at least one packet to be sent between apparatuses in said computer
 - 8 cluster;

an Internet Protocol residing in said memory, said Internet Protocol routing said at least one packet between apparatuses in said computer cluster; and

a cluster servicer residing in said memory, said cluster servicer including a cluster destination address table, said cluster destination address table including at least one Internet address for said each apparatus in said computer cluster, wherein a message can be sent to one of said each apparatus in said computer cluster by said cluster servicer determining one of said at least one Internet address of said one of said each apparatus in said computer cluster from said cluster destination address table and passing said determined Internet address and said message to said User Datagram Protocol, wherein said User Datagram Protocol formats said determined Internet address and said message into at least one packet and passes said at least one packet to said Internet Protocol, wherein said Internet Protocol routes said at least one packet to said one of said each apparatus in said computer cluster.

- 11. (Original) The apparatus of claim 7 wherein said cluster destination address table
- 2 includes at least one Internet address for said at least one other apparatus networked to

11

12

13

14

15

16

17

18

19

20

21

1

- 5
- App Amo
 - 3 said apparatus, and wherein a message to one of said at least one other apparatus can be
 - 4 sent by said cluster servicer retrieving said at least one Internet address for said at least
 - 5 one other apparatus from said cluster destination address table and passing said retrieved
 - 6 Internet address and said message to said network servicer.
 - 1 12. (Original) The apparatus of claim 11 wherein said network message servicer
 - 2 comprises:
 - a User Datagram Protocol which formats at least one packet from said message
 - 4 and said retrieved Internet address; and
 - an Internet Protocol, said Internet protocol routing said at least one packet to said
 - one of said at least one other apparatus networked to said apparatus.
 - 1 13. (Original) The apparatus of claim 12 wherein said at least one other apparatus
 - 2 networked to said apparatus is networked through a plurality of routers, and wherein said
 - 3 Internet Protocol comprises specific routing directions indicating which router of said
 - 4 plurality of routers should be used for routing said at least one packet to said at least one
 - 5 other apparatus.

1	14. (Previously Amended) A cluster of computers, each computer in said cluster of
2	computers comprising:
3	at least one processor;
4	at least one network adapter;
5	a memory coupled to said at least one processor;
6	a User Datagram Protocol residing in said memory, said User Datagram Protocol
7	formatting at least one packet to be sent between computers in said cluster of
8	computers;
9	an Internet Protocol suite residing in said memory, said Internet Protocol routing
10	said at least one packet between computers in said cluster of computers; and
11	a cluster servicer residing in said memory, said cluster servicer including a cluster
12	destination address table, said cluster destination address table including a cluster
13	destination address table entry for each computer in said cluster of computers, said
14	each cluster destination address table entry comprising:
15	an Internet address for each of said at least one network adapter;
16	status information for each of said at least one network adapter; and
17	adapter information for each of said at least one network adapter;

wherein said cluster servicer sends a cluster message to a destination computer in said

19 cluster of computers by determining an Internet address for said destination computer

20 from said cluster destination address table entry for said destination computer and passing

said determined Internet address of said destination computer and said cluster message to

22 said User Datagram Protocol, wherein said User Datagram Protocol formats said

23 determined Internet address and said cluster message into a packet and passes said packet

24 to said Internet Protocol, wherein said Internet Protocol routes said packet to said

destination computer, said Internet Protocol routing said packet to said destination

26 computer without requiring an intervening dedicated local area network to said destination

27 computer.

21

7

2

1 15. (Original) The cluster of computers of claim 14 wherein said Internet Protocol on

2 said each computer in said cluster of computers includes a routing table, said routing table

3 including at least one routing table entry, said at least one routing table entry including a

4 subnet address and corresponding routing direction for said subnet address, and wherein at

5 least one additional routing table entry exists in said routing table for each computer in

said cluster of computers that is attached to a plurality of routers, said at least one

additional routing table entry including a subnet address and corresponding routing

8 direction for said subnet address that specifies to which router of said plurality of routers

9 to route said at least one packet.

1 16. (Original) The cluster of computers of claim 14 wherein said cluster servicer in

2 each computer in said cluster of computers can employ said cluster destination address

table, said User Datagram Protocol, and said Internet Protocol to route all cluster

4 messages necessary to maintain said cluster of computers.

1 17. (Original) The cluster of computers of claim 14 wherein said cluster servicer can

determine from said status information in said cluster destination address table whether a

Con!

¢

- App Am
 - 3 network adapter for one of said each computer in said cluster of computers is reachable or
 - 4 unreachable.
 - 1 18. (Original) The cluster of computers of claim 14 wherein said cluster servicer can
 - 2 determine from said adapter information in said cluster destination address table how to
 - 3 assign cluster responsibilities to said each computer in said cluster of computers.
 - 1 19. (Original) The cluster of computers of claim 14 wherein said cluster servicer can
 - 2 determine from said adapter information in said cluster destination address table how to
 - 3 size cluster messages to each network adapter on said each computer in said cluster of
 - 4 computers.

ConT

- 1 20. (Original) The cluster of computers of claim 14 wherein at least one computer in
- 2 said cluster of computers has a plurality of network adapters, and wherein each cluster
- 3 destination address table entry corresponding to said at least one computer in said cluster
- 4 of computers with a plurality of network adapters includes an Internet address for each of
- 5 said plurality of network adapters, said plurality of Internet addresses ordered
- 6 preferentially in said cluster destination address table entry, and wherein said cluster
- 7 servicer can send a cluster message to a destination computer with a plurality of adapters
- 8 by determining a primary Internet address for said destination computer with a plurality of
- 9 adapters from said cluster destination address table entry corresponding to said destination
- 10 computer with a plurality of network adapters.
- 1 21. (Original) The cluster of computers of claim 20 wherein said cluster servicer can
- send a cluster message to a destination computer with a plurality of adapters by
- 3 determining an alternate Internet address for said destination computer with a plurality of
- 4 adapters from said cluster destination address table corresponding to said destination
- 5 computer with a plurality of adapters, when a timely response from said destination
- 6 computer with a plurality of adapters is not received after sending a cluster message

Cont

7 addressed to said primary Internet address for said destination computer with a plurality of

8 adapters.





1

22. (Original) A method comprising the steps of:

creating network address information for each computer in a cluster configuration;

3 storing said network address information on said each computer in said cluster

4 configuration; and

5 6 employing said network address information in conjunction with a network message servicer for cluster communications in said cluster configuration beyond a single local area network.

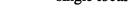
7

1

4

5

7



23. (Original) The method of claim 22 further comprising the steps of:



creating routing information for each computer connected to a plurality of routers in said cluster configuration, said routing information identifying which router of

said plurality of routers to employ in communicating between said each computer

connected to said plurality of routers in said cluster configuration; and

6

storing said routing information on each said computer connected to said plurality

of routers in said cluster configuration.

1

2

24. (Original) The method of claim 22 wherein the step of creating network address

information for said each computer in said cluster configuration comprises the step of

3 creating a cluster destination address table on said each computer in said cluster

4 configuration, wherein the step of creating said cluster destination address table comprises

5 creating a cluster destination address table entry for said each computer in said cluster

6 configuration, said cluster destination address table entry including at least one network

- 7 address for a computer in said cluster configuration corresponding to said cluster
- 8 destination address table entry.
- 25. 1 (Original) The method of claim 24 wherein the step of employing said network
- 2 address information in conjunction with a network message servicer for cluster
- 3 communications in said cluster configuration beyond a single local area network comprises
- 4 the steps of:
- 5 retrieving said at least one network address from at least one cluster destination address table entry corresponding to at least one computer in said cluster 6 7 configuration;
- employing said network message servicer to send at least one cluster message to 8 9 said at least one computer in said cluster configuration by passing said retrieved at least one network address for said at least one computer in said cluster 10 11 configuration along with said at least one cluster message to a network message servicer, said network message servicer routing said at least one cluster message to 12 13 said at least one computer in said cluster configuration using said retrieved at least 14 one network address.
- 26. (Original) The method of claim 25 wherein the step of employing said network 1
- 2 message servicer to send at least one cluster message to said at least one computer in said
- cluster configuration comprises the step of passing said retrieved at least one network 3
- address for said at least one computer in said cluster configuration along with said at least 4
- 5 one cluster message to a User Datagram Protocol, said User Datagram Protocol
- 6 formatting said retrieved at least one network address for said at least one computer in
- 7 said cluster configuration and said at least one cluster message into at least one packet,
- 8 said User Datagram Protocol passing said at least one packet to an Internet Protocol, said

ĕ



- 9 Internet Protocol routing said at least one packet to said at least one computer in said 10 cluster configuration.
- 27. 1 (Original) The method of claim 24 wherein the step of creating a cluster
- 2 destination address table for said each computer in said cluster configuration comprises
- 3 the step of creating a cluster destination address table entry for said each computer in said
- 4 cluster configuration, said cluster destination address table entry including a primary
- 5 network address and at least one alternate network address for said computer in said
- 6 cluster configuration corresponding to said cluster destination address table entry.
- 28. 1 (Previously Amended) The method of claim 27 wherein the step of employing said
- 2 network address information in conjunction with a network message servicer for cluster
- communications in said cluster configuration beyond a single local area network comprises 3
- 4 the steps of:
- 5 retrieving at least one network address from at least one cluster destination address
- 6 table entry corresponding to at least one computer in said cluster configuration;
- 7 employing said network message servicer to send at least one cluster message to
- said at least one computer in said cluster configuration by passing said primary 8
- 9 network address for said at least one computer in said cluster configuration along
- 10 with said at least one cluster message to a network message servicer, said network
- 11 message servicer routing said at least one cluster message to said at least one
- 12 computer in said cluster configuration using said primary network address;
- 13 awaiting a reply to said at least one cluster message sent to said at least one
- 14 computer in said cluster configuration using said primary network address; and

Con 1

employing said network message servicer to send at least one cluster message to
said at least one computer in said cluster configuration by passing said at least one
alternate network address for said at least one computer in said cluster
configuration along with said at least one cluster message to a network message
servicer, said network message servicer routing said at least one cluster message to
said at least one computer in said cluster configuration using said at least one
alternate network address, when said reply to said at least one cluster message sent
to said at least one computer in said cluster configuration using said primary
network address is not received in a timely manner.

29. (Original) The method of claim 22 wherein the step of storing said network address information on said each computer in said cluster configuration comprises the step of storing a copy of said network address information on a first computer in said cluster configuration, said first computer updating said network address information with adapter information about said first computer; said first computer sending a copy of updated network address information to each other computer in said cluster configuration; said each other computer in said cluster configuration updating said network address information with adapter information about said each other computer in said cluster configuration; said each computer in said cluster configuration exchanging said updated network address information such that said each computer in said cluster configuration receives an identical copy of said updated network address information.

30. (Original) The method of claim 29 wherein the steps of:

updating said network address information about said first computer comprises the step of updating said network address information with adapter type, maximum transmission unit, subnet mask, and class of service for said first computer; and

Appl. No. 09/173,090 Amdt. Dated November 14, 2003

Con T

5 6

7

8

updating said network address information about said each other computer in said cluster configuration comprises the step of updating said network address information with adapter type, maximum transmission unit, subnet mask, and class of service for each other computer in said cluster configuration.

4

31. 1 (Original) A method of communicating between computers in a cluster comprising the steps of: 2 3 creating a cluster destination address table on said each computer in said cluster, said cluster destination address table including a cluster destination address table 4 5 entry for said each computer in said cluster, said cluster destination address table 6 entry including a primary network address and at least one alternate network address for said computer in said cluster corresponding to said cluster destination 8 address table entry; 9 storing said cluster destination address table on said each computer in said cluster; 10 and 11 employing said cluster destination address table in conjunction with a network 12 message servicer for communicating between computers in said cluster without 13 requiring an intervening dedicated local area network. 32. 1 (Original) The method of claim 31 further comprising the steps of: 2 adding routing information to said network message servicer for each computer 3 connected to a plurality of routers in said cluster, said routing information 4 identifying which router of said plurality of routers to employ in communicating 5 between said each computer connected to said plurality of routers in said cluster. 33. 1 (Original) The method of claim 31 wherein the step of employing said cluster 2 destination address table in conjunction with a network message servicer for communicating between computers in said cluster without requiring an intervening 3

dedicated local area network comprises the steps of:

Amdt. Dated November 14, 2003

5 retrieving at least one primary network address from at least one cluster 6 destination address table entry corresponding to at least one computer in said 7 cluster; and

8 employing said network message servicer to communicate with at least one 9 computer in said cluster by passing said retrieved at least one primary network 10 address for said at least one computer in said cluster along with at least one cluster message to said network message servicer, said network message servicer routing 11 12 said at least one cluster message to said at least one computer in said using said 13 retrieved at least one primary network address.

(901)

1

2

3

4

5

6

7

8

9

34. (Original) The method of claim 33 wherein the step of employing said network message servicer to communicate with at least one computer in said cluster comprises the step of passing said retrieved at least one primary network address for said at least one computer in said cluster along with at least one cluster message to a User Datagram Protocol, said User Datagram Protocol formatting said retrieved at least one primary network address for said at least one computer in said cluster and said at least one cluster message into at least one packet, said User Datagram Protocol passing said at least one packet to an Internet Protocol, said Internet Protocol routing said at least one packet to

35. (Original) The method of claim 31 wherein the step of storing said cluster 1 2 destination address table on said each computer in said cluster comprises the step of

said at least one computer in said cluster.

- 3 storing a copy of said cluster destination address table on a first computer in said cluster,
- 4 said first computer updating said cluster destination address table with adapter information
- 5 about said first computer; said first computer sending a copy of an updated cluster
- 6 destination address table to each other computer in said cluster; said each other computer
- 7 in said cluster updating said cluster destination address table with adapter information

- about said each other computer in said cluster; said each computer in said cluster 9 exchanging said updated cluster destination address table such that said each computer in
- 10 said cluster receives an identical copy of said updated cluster destination address table.
 - 36. (Original) The method of claim 35 wherein the steps of:

Con'l

8

1

2

3

4

5

6

7

8

9

10

11

updating said cluster destination address table with adapter information about said first computer comprises the step of updating said cluster destination address table with adapter type, maximum transmission unit, subnet mask, and class of service for each said primary network address and said each at least one alternate network address for said first computer; and

updating said cluster destination address table with adapter information about said each other computer in said cluster comprises the step of updating said cluster destination address table with adapter type, maximum transmission unit, subnet mask, and class of service for each said primary network address and said each at least one alternate network address for said each other computer in said cluster.

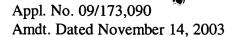
- ?
- 1 37. (Original) A program product comprising:
- 2 (A) a cluster servicer, said cluster servicer facilitating cluster messaging with at
- 3 least one other computer without requiring an intervening dedicated local area
- 4 network to said at least one other computer; and
- 5 (B) signal bearing media bearing said cluster servicer.



- 1 38. (Original) The program product of claim 37 wherein said signal bearing media
- 2 comprises transmission media.
- 1 39. (Original) The program product of claim 37 wherein said signal bearing media
- 2 comprises recordable media.
- 1 40. (Original) The program product of claim 37 further comprising a network
- 2 message servicer, said network message servicer routing at least one cluster message from
- 3 said cluster servicer to said at least one other computer.
- 1 41. (Original) The program product of claim 40 wherein said network message
- 2 servicer comprises:
- 3 a User Datagram Protocol, said User Datagram Protocol formatting said at least
- 4 one cluster message to be sent to said at least one other computer;
- an Internet Protocol, said Internet Protocol routing said at least one formatted
- 6 cluster message to said at least one other computer without requiring an
- 7 intervening dedicated local area network to said at least one other computer.

- 42. 1 (Original) The program product of claim 40 wherein said cluster servicer includes
- a cluster destination address table, said cluster destination address table comprising at least 2
- one network address for said at least one other computer, and wherein said cluster 3
- servicer retrieves said at least one network address for said at least one other computer 4
- from said cluster destination address table to facilitate cluster messaging with said at least 5
- one other computer without requiring an intervening dedicated local area network to said 6
- 7 at least one other computer.
- 43. 1 (Original) The program product of claim 42 wherein said cluster destination
- 2 address table further comprises cluster status information for said at least one other
- 3 computer.
- 44. (Original) The program product of claim 42 wherein said cluster destination 1
- 2 address table further comprises adapter information for said at least one other computer.

- 45. (Previously Amended) A program product comprising: 1
- 2 (A) a network message servicer;
- 3 (B) a cluster servicer, said cluster servicer including a cluster destination address 4 table, said cluster destination address table including at least one address for each 5 of a plurality of apparatuses in a computer cluster, wherein a message to one of 6 said plurality of apparatuses can be sent by said cluster servicer retrieving one of said at least one address for said one of said plurality of apparatuses from said 7 8 cluster destination address table and passing said retrieved address and said 9 message to said network servicer, wherein said network servicer routes said 10 message to said one of said plurality of apparatuses without requiring an 11 intervening dedicated local area network to said one of said plurality of 12 apparatuses; and 13 (C) signal bearing media bearing said network message servicer and said cluster 14 servicer.
- 46. 1 (Original) The program product of claim 45 wherein said signal bearing media 2 comprises transmission media.
- 47. 1 (Original) The program product of claim 45 wherein said signal bearing media 2 comprises recordable media.
- 48. 1 (Original) The program product of claim 45 wherein said cluster destination 2 address table further comprises adapter information for said each of said plurality of 3 apparatuses.



CONT R

- 1 49. (Original) The program product of claim 45 wherein said cluster destination
- 2 address table further comprises status information for said each of said plurality of
- 3 apparatuses.

Appl. No. 09/173,090 Amdt. Dated November 14, 2003

1 50. (Original) The program product of claim 45 comprising:

a User Datagram Protocol, said User Datagram Protocol formatting at least one

packet to be sent between said plurality of apparatuses in said computer cluster;

an Internet Protocol, said Internet Protocol routing said at least one packet

5 between said plurality of apparatuses in said computer cluster; and

a cluster servicer, said cluster servicer including a cluster destination address table, said cluster destination address table including at least one Internet address for each of said plurality of apparatuses in said computer cluster, wherein a message can be sent to one of said plurality of apparatuses in said computer cluster by said cluster servicer determining one of said at least one Internet address for said one of said plurality of apparatuses in said computer cluster from said cluster destination address table and passing said determined Internet address and said message to said User Datagram Protocol, wherein said User Datagram Protocol formats said determined Internet address and said message into at least one packet and passes said at least one packet to said Internet Protocol, wherein said Internet Protocol routes said at least one packet to said one of said plurality of apparatuses in said computer cluster.

51. (Original) The program product of claim 45 wherein said cluster destination

address table includes at least one Internet address for said each of said plurality of

apparatuses in said computer cluster, and wherein a message to one of said plurality of

4 apparatuses can be sent by said cluster servicer retrieving one of said at least one Internet

5 address for said one of said plurality of apparatuses from said cluster destination address

table and passing said retrieved Internet address and said message to said network

7 servicer.

CONT

6

7

8

9

10

11

12

13

14

15

16

17

1

2

3

6

- 52. 1 (Original) The program product of claim 51 wherein said network message
- servicer comprises: 2
- 3 a User Datagram Protocol which formats at least one packet from said message
- 4 and said retrieved Internet address; and
- 5 an Internet Protocol, said Internet protocol routing said at least one packet to said
- 6 one of said plurality of apparatuses networked to said apparatus.
- 53. (Original) The program product of claim 52 wherein said at least two of said 1
- 2 plurality of apparatuses in said computer cluster are networked through a plurality of
- 3 routers, and wherein said Internet Protocol comprises specific routing directions indicating
- 4 which router of said plurality of routers should be used for routing said at least one packet
- between said two of said plurality of apparatuses in said computer cluster networked 5
- 6 together through a plurality of routers.

CoNT
2

1	54. (Previously Amended) A program product comprising:
2	a User Datagram Protocol, said User Datagram Protocol formatting at least one packet to be sent between computers in a cluster of computers;
4	an Internet Protocol suite, said Internet Protocol routing said at least one packet
5	between computers in said cluster of computers; and
6	a cluster servicer, said cluster servicer including a cluster destination address table,
7	said cluster destination address table including a cluster destination address table
8	entry for each computer in said cluster of computers, said each cluster destination
9	address table entry comprising:
10	an Internet address for each network adapter;
11	status information for said each network adapter; and
12	adapter information for said each network adapter;
13	wherein said cluster servicer sends a cluster message to a destination computer in said
14	cluster of computers by determining an Internet address for said destination computer
15	from said cluster destination address table entry for said destination computer and passing
16	said determined Internet address of said destination computer and said cluster message to
17	said User Datagram Protocol, wherein said User Datagram Protocol formats said
18	determined Internet address and said cluster message into a packet and passes said packet
19	to said Internet Protocol, wherein said Internet Protocol routes said packet to said
20	destination computer without requiring an intervening dedicated local area network to said
21	destination computer.

1 55. (Original) The program product of claim 54 wherein said signal bearing media

2 comprises transmission media.

56. 1 (Original) The program product of claim 54 wherein said signal bearing media

2 comprises recordable media.

57. (Original) The program product of claim 54 wherein said Internet Protocol 1

2 includes a routing table, said routing table including at least one routing table entry, said at

least one routing table entry including a subnet address and corresponding routing 3

4 direction for said subnet address, and wherein at least one additional routing table entry

5 exists in said routing table for each computer in said cluster of computers that is attached

6 to a plurality of routers, said at least one additional routing table entry including a subnet

7 address and corresponding routing direction for said subnet address that specifies to which

8 router of said plurality of routers to route said at least one packet.

58. (Original) The program product of claim 54 wherein said cluster servicer can 1

employ said cluster destination address table, said User Datagram Protocol, and said 2

3 Internet Protocol to route all cluster messages necessary to maintain said cluster of

4 computers.

59. (Original) The program product of claim 54 wherein said cluster servicer can 1

2 determine from said status information in said cluster destination address table whether a

network adapter for one of said each computer in said cluster of computers is reachable or 3

4 unreachable.

3

60. (Original) The program product of claim 54 wherein said cluster servicer can 1

determine from said adapter information in said cluster destination address table how to 2

assign cluster responsibilities to said each computer in said cluster of computers.

- •
- 1 61. (Original) The program product of claim 54 wherein said cluster servicer can
- 2 determine from said adapter information in said cluster destination address table how to
- 3 size cluster messages to each network adapter on said each computer in said cluster of
- 4 computers.
- 1 62. (Original) The program product of claim 54 wherein at least one computer in said
- 2 cluster of computers has a plurality of network adapters, and wherein each cluster
- destination address table entry corresponding to said at least one computer in said cluster
- 4 of computers with a plurality of network adapters includes an Internet address for each of
- 5 said plurality of network adapters, said plurality of Internet addresses ordered
- 6 preferentially in said cluster destination address table entry, and wherein said cluster
- 7 servicer can send a cluster message to a destination computer with a plurality of adapters
- 8 by determining a primary Internet address for said destination computer with a plurality of
- 9 adapters from said cluster destination address table entry corresponding to said destination
- 10 computer with a plurality of network adapters.
- 1 63. (Original) The program product of claim 62 wherein said cluster servicer can send
- 2 a cluster message to a destination computer with a plurality of adapters by determining an
- 3 alternate Internet address for said destination computer with a plurality of adapters from
- 4 said cluster destination address table corresponding to said destination computer with a
- 5 plurality of adapters, when a timely response from said destination computer with a
- 6 plurality of adapters is not received after sending a cluster message addressed to said
- 7 primary Internet address for said destination computer with a plurality of adapters

Copi